

REMARKS

In view of the above amendments and following remarks, reconsideration of the rejections contained in the Office Action of March 13, 2007 is respectfully requested.

It is initially noted that a number of minor editorial changes have been made to the specification and abstract for the sake of form. No new matter has been entered.

In the Office Action, the Examiner rejected claims 1-3, 6-11 and 14-17 as being anticipated by Song et al., U.S. Patent 6,091,553 (Song). However, it is respectfully submitted that the present invention, particularly as now set forth in new claims 18-34, clearly patentably distinguishes over Song.

According to one aspect of the present invention, a track coil of an optical pickup is positioned so that it is closer to the optical axis of the lens member 12 than an end portion 12b of the lens member. See for example Fig. 2. By positioning the track coil in this way with respect to the axis of the lens, it is closer to the axis and it becomes close to the center of the magnetic field so that it is difficult to tilt the optical axis during use. Further, this also reduces the size and weight of the optical pickup as a whole.

This aspect of the present invention is reflected in independent claim 18, which generally corresponds to prior claim 1. In this claim it is recited that at least part of the track coil is in a position that is closer to the optical axis of the lens member than the outermost end portion of the lens member.

Such is not the case in the Song patent cited by the Examiner. In the Office Action, the Examiner stated that the size of the lens member was larger than the inner diameter of the tracking coil in Fig. 3. However, this is not the case. What is referred to by the Examiner as the inner diameter of the tracking coil as seen in Fig. 3 is not in fact the tracking coil. It is acknowledged that Song refers to coil 54 as the tracking coil. However, it is readily seen that coil 54 corresponds to coil 14 of the present disclosure. Further, it is readily appreciated that the focusing coil needs to move the lens element in a direction along its axis, i.e. closer to or further away from an optical disk. The arrangement of Song makes the coil 54 capable of this, while the coils 52a and 52b are the tracking

coils. It is respectfully submitted and believed that Song has misstated the terminology for the respective coils.

Accordingly, the Examiner's reference to Fig. 3 is in fact an illustration of the end portion of the focusing coil and not the tracking coil.

The above distinction is further emphasized by new dependent claims 35 et. seq. which recite that the focus coil is wound about the optical axis, which would clearly not be the case with Song if coil 54 is considered to be the tracking coil.

Independent claims 21, 26, 29 and 34 define over Song for the same reason, it is noted.

In accordance with another aspect of the present invention, as shown for example in Fig. 3, at least one of the focus coil and the track coil has a wound line shape that includes first sides facing to and parallel to the magnetic pole surfaces of the magnets 18 and 19 and second sides, such as indicated by references 14d-14f in Fig. 3, that bulge outwardly in a diametrical direction of the coil from ends of the second sides that adjoin the first sides and toward a portion of the second sides between the ends of the second sides. By bulging outwardly in the diametrical direction, at these portions the direction of the magnetic flux that is formed between the magnetic pole surfaces also deviates outwardly in the middle part between the pole surfaces. The result is that the deviating direction of the magnetic flux and the wound line that is bulging outward in the diametrical direction form a relatively small angle and become almost parallel. This decreases the mutual electromagnetic action of the magnetic flux and the electric current so that it is possible to decrease the force that tends to tilt the optical axis of the lens member and accordingly secure a high reading accuracy of the optical pickup as a whole.

This feature is reflected in each of independent claims 19, 21, 27 and 29. Each of these claims distinguishes over Song for the recitation of this feature.

The Examiner took the position that Song had portions of the coils joining both ends of the facing sides that partially bulge outward in the diametrical direction. The Examiner cited Fig. 1 and that the coils were wound in an outward direction. However, this is clearly not the case. Looking at Fig. 1, which describes the prior art to Song, it can be seen that all of the coils have flat sides. There is no bulging portion between the ends of the sides of the coil. In particular, there are no ends

of second sides adjoining first sides that bulge toward a portion of the second sides between the ends of the second sides. There is no bulging illustrated whatsoever. Accordingly, this position by the Examiner is respectfully submitted to be clearly incorrect. Each of claims 19, 21, 27 and 29 recite this aspect, and thus clearly distinguish over Song.

As can be seen from Fig. 2, another aspect of the present invention lies in that a lens holder 13 has a holding portion 13a holding a flange portion 12b on a periphery of the lens 12. The holding portion has an outermost diameter that is smaller than the outermost peripheral edge of the lens member, it is noted. The support of the lens member is thus from below the lens member with respect to the optical disk, allowing the tracking coils 15 to be moved closer to the optical axis 12a. While the Examiner cited Song as having a number of features directed to the holder, it is clear that Song does not have any such holder as defined in claim 23, for example, in which it is recited that the holding portion has an outermost diameter smaller than the outermost peripheral edge of the lens member. No such indication can be taken from the illustration. Accordingly, each of independent claims 23, 24, 31 and 32 clearly distinguish over Song for this reason.

In view of the above it is respectfully submitted that the present invention as reflected in all of the claims that are now pending in this application distinguish over Song. Indication of such is respectfully requested.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance, and the Examiner is requested to pass the case to issue. If the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact Applicants' undersigned representative.

Respectfully submitted,

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